



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/041,094	12/28/2001	Sunil Palakodati	10541-183	2388
29074	7590	06/06/2006	EXAMINER	
VISTEON C/O BRINKS HOFER GILSON & LIONE PO BOX 10395 CHICAGO, IL 60610			WINNER, TONY H	
			ART UNIT	PAPER NUMBER
			3611	

DATE MAILED: 06/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/041,094

Applicant(s)

PALAKODATI ET AL.

Examiner

Tony H. Winner

Art Unit

3611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-22 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

Acknowledgment

1. Receipt of an Affidavits and Applicant argument filed 4/9/04 has been acknowledged and entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Prior Art (Figures 1-3) and in view of Whitney (USPN. 626,515).

PA discloses an electric power steering system comprising:

- a. an assist pinion (figure 2) with first and second ends,
- b. first end may engage a rack,
- c. second end is coupled to the pinion gear,
- d. an electric motor (18) having a rotating output shaft and the shaft is coupled to the pinion gear.

PA lacks the teaching of a roller pinion gear with plurality of radially projecting teeth.

Whitney discloses a roller pinion gear comprising:

- a. a roller wheel (a2) having plurality of radially projecting teeth (T),
- b. pin rotatably mounted in and projecting from the periphery,

c. a pinion shaft (B) coupled to the roller wheel. Whitney teaches the use of roller pinion gear so as to reduce the friction between two meshing gears.

Based on the teaching of Whitney, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the any power transfer devices including the steering gear of the PA to include the roller pinion gear of Whitney so as to reduce the friction between two meshing gears.

With respect to claims 4-5, 9, and 11-12, the PA as modified by Whitney meets all of the claimed limitations.

With respect to claims 6 and 7, PA as modified by Whitney discloses the claimed invention except for the range of the gear ratio. It would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the gear ratio between the roller screw and the assist pinion so as to provide greater efficiency thus better performance, since it has been since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

The reasoning of rejection is also applied to claims 7-8, 13-15, and 17.

With respect to claims 18-19, PA as modified by Whitney meets all of the method claimed limitations.

The method and reasoning of rejection for claims 20-22 are the same as claims 6-7.

Response to Arguments

3. Applicants' arguments filed 4/9/04 have been fully considered but they are not persuasive.

The following are the applicants' arguments listed in alphabetical order.

a. the Counsel believed or under the impression that by submitting a Declaration under 37 CFR –1.132 would put the application in condition for allowance.

b. the Counsel/Co applicant also indicated the "challenges associated with package size, weight, complexity, efficiency, durability, and costs that discouraged the consideration of using roller gear in the power steering environment that is not taught in the PA.

c. there is no teaching of using roller pinion gear for a power steering device for nearly 100 years. Therefore, it would not have been obvious to modify a power steering device to include the roller pinion gear as taught by Whitney.

In response, the Examiner believes Counsel has misinterpreted the comment with regard to the Declaration. The Declaration is a means to present a point/argument to the office and not of sole purpose to put the case in condition for allowance. As in this case, the Declaration did not convinced the Examiner to withdraw the rejection. In this instant, the Declaration provides a few technical points (advantage/disadvantage) with regard to the roller gear in the power steering environment. The Examiner finds the evidence ("roller gear was known to be able to handle higher loads") in the Declaration and in combination with the teaching of Whitney further confirm or strengthen the reasoning for combining the roller gear with a power steering system. With regard to

Art Unit: 3611

the engineering challenge associated with package size, weight, complexity, cost and etc.. of a roller gear steering system will not be addressed in this respond since the weight, size, material (e.g. structure) etc.. are not part of the claimed invention.

With regard to argument c, the fact that there is no teaching or patent on this specific combination does not necessarily mean that it is not obvious. It merely means that no one has gotten a patent of this combination. The reason may be that the combination is obvious, and all the prior art attempts at a patent are now residing in the Abandoned filed.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


5. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Anthony H. Winner whose telephone number is (571)

Art Unit: 3611

272-6654. The examiner can normally be reached on Monday-Friday from 9:30 am to 6:30 pm. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

6. Information regarding the status of an application may be obtained from the Patent Application Information-Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

7. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-6584.


TONY WINNER
PATENT EXAMINER

May 30, 2006